RESEARCH PROPOSAL

Efficacy of Psychological Interventions for Postpartum Depression and Their Role in Enhancing Certain Positive Psychological Concomitants

For Registration to the degree of Doctor of Philosophy

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Introduction

Motherhood is an epitome of love and happiness and brings with it a feeling of being blessed. While this new beginning promises to bring joyful moments to every mother but there is a flip side to it too. Baby blues are experienced by more than 40% mothers. This emotional state consists of tiredness, exhaustion, tension, unhappiness, stress about constant fear of rearing child leading into self doubt and sadness. This disorder signifies a disruption of the relationship between mother and infant. This picture commonly disappears within a few days or weeks of delivery, but if it persists for more than two weeks, it leads to postpartum depression.

DSM 5 does not include postpartum depression as an independent criterion of diagnosis, however if symptoms of Major depressive disorder are seen within 4 weeks of post delivery period, then it is considered to be postpartum depression. Diagnostic criteria in this case includes: (five or more symptoms out of 09 lasting for a period of two weeks)Low mood, not interested in any desirable activities, disturbances in sleep and appetite, increase fatigability, lack of concentration, suicidal intent, feeling of worthlessness. The patient may also report significant disturbances in personal, social and occupational functioning which cannot be attributed to any medical reason or due to substance abuse; additionally there should not be any psychotic or manic/ hypo manic conditions.

Depression in this phase of childbearing is a major concern for public health because of its complications and also due to various events related to biopsychosocial changes, leading to psychiatric illness and vulnerability to predisposing genetical and psychosocial factors.

Postpartum depression is caused due to multiple reasons Viz Psychological, obstetric complications, biological, socio- environmental and lifestyle factors. Various studies have shown

high correlation between history of any psychiatric illness like anxiety, depression during pregnancy and increased risk of postpartum depression due to high probability of hormonal imbalances (Davey, Tough, Adair, Benzies, 2011).

Obstetric factors such as complicated pregnancy, last moment emergencies in labor room, birth by cesarean section, problems in breast feeding etc are all linked to high chances of PPD (Gaillard , Le Strat , Mandelbrot , Keïta , Dubertret ,2014).

Many a times, expectations of a smooth pregnancy and post pregnancy period may not be met. This may involve negative experiences like insomnia, not being able to carry out normal activities like socializing, travelling, being under rest due to major changes in daily routine post delivery to name a few. All these may hamper the bond between the mother and child and further negatively impact their relationship (Figueiredo, Canário , Field , 2014).

Biological factors which are linked to high chances of PPD are: Motherhood at a young age (Milgrom, Gemmill, Bilszta, Hayes, Barnett, Brooks *et al*. 2008), Disorders of glucose metabolism, changes in the serotonin receptors & tryptophan due to deficiency of nutrients, reduced consumption of food enriched in protein (Aishwarya, Rajendiren, Kattimani, Dhiman, Haritha *et al.* 2013), Oxytocin plays a vital role in regulation of emotions when oxytocin induces activity of serotonin receptors it leads into feeling stressed (Yoshida, Takayanagi, Inoue, Kimura, Young, 2009),Changes and fluctuations in Estrogen lead into depression (Douma, Husband, Donnell, Barwin, 2005),Corticotrophin, thyroid dysfunction, cytokine and inflammatory responses, increased apoptosis T cells leads into changes in sleep, appetite, behavior, fatigability, temperament, mood swings (Miller, 2010).

Socio environmental factors predicting chances of postpartum depressions include: Lack of social support, Financial instability and Unemployment (Chien , Tai, Yeh, 2012), Interpersonal problems with spouse (Feng, Jones, Wang, 2015),Sexual & verbal abuse, Domestic violence, Drinking or smoking behavior (Gurber, Baumeler , Grob, Surbek, Stadlmayr, 2017).

Lifestyle factors linked with postpartum depression are: Unhealthy food habits, changes in glucose metabolism, Sleep deprivation (Chang, Pien , Duntley, Macones ,2010), Lack of Social Interaction, Poor quality of life, Reduction in vitamin B6, B2, Intake of Zinc & selenium results into incidence of PPD(Ellsworth-Bowers, Corwin, 2012).

Management for Postpartum depression

Implementing Regular exercises and healthy eating habits play a vital role in reducing 50% chances of PPD (Chatzi, Melaki, Sarri, Apostolaki, Roumeliotaki, Georgiou *et al*. 2011).

Regular exercise and walk comes with medicinal benefits and reduce risk of depression as they increase endogenous opioids and endorphins, which have positive impact on the mental well being. In addition, they enhance concentration and problem solving skills (Dinas, Koutedakis, Flouris, 2011).

Psychological interventions in combination with pharmacological treatment predict a better outcome. Psychological and other intervention includes psycho education which helps in awareness about the nature and course of illness and promotes coping and problem solving skills. A stronger social support network enhances interpersonal communication, deals with distortive cognitive patterns and increase sense of self efficacy (Appleby, Warner, Whitton, Faragher 1997).

Women who are prone to depression need to be assessed and provided with psychological treatment to curb the risk factor associated with psychosocial reasons. The mechanism on which these intervention works are:

- Dealing with feeling of being alone & aloof
- Promoting healthy thoughts & behavior; decreasing dysfunctional thinking pattern
- Providing positive mental states
- Providing awareness in regard to accessibility of medical health services.

Stress can be dealt with and decreased through strategies like:

- Addressing the potential for risk issued by these hassles
- Providing various ways of copying, inculcating skills to cope & solve problems
- Promoting adaptive behavior

Interpersonal psychotherapy, debriefing, social support, supportive therapy, relaxation with guided imagery, continuity of care, early postpartum follow up, are some of the evidence based psychological therapies for the management of postpartum depression.

Cognitive behaviour therapy (CBT): CBT, developed by Beck in 1960s, is a form of psychotherapy, in which therapist and the client work together, in collaboration, on the patient's cognitive schemas in an effort to relieve symptoms, change behaviour, and ease suffering. An important component of treatment is to make clients aware of their negative automatic thoughts about one's self, others and the world.

Interpersonal Therapy: IPT developed by Klerman and colleagues in 1984, aims to reduce the sufferings of the patients by enhancing their interpersonal skills and functioning. The process to

enhance their functioning to deal interpersonal and changing or reducing the associated expectations. IPT focuses to improve their support system and help them to manage their ongoing interpersonal distress.

Mindfulness-based cognitive therapy MBCT Manualized group intervention developed by Zindel Segal, John Teasdale, and Mark Williams (2000), is the modified version of cognitive therapy that includes mindfulness techniques like yoga, meditation and relaxation techniques. Incorporating these techniques, MBCT practitioner teaches patients to deal with and overcome their negative automatic patterns of thought (Kabat, 1994). It is used for dealing with recurrent episodes of depression and relapse prevention (Segal, 2012; Williams, 2008). It contains weekly sessions wherein principles of cognition and techniques of meditation and relaxations are used to help the patient to be aware about the present moment and disengage from intrusive recurrent thoughts. This is done by promoting disengagement from cognitions related to thoughts and feelings of depression (Kabat, 1994).

The present study will also explore the impact of different interventions on certain positive psychological variables in patients with postpartum depression. These variables are as under:

Emotion regulation efficacy: It is a multifaceted process of initiation, avoidance, reduction, upholding or adjusting with inner thoughts and diverse feelings in order to promote an individual's adjustment (Eisenberg & Spinrad, 2004). It counters adverse or irritating situations and facilitates expression or organization of positive feelings such as joy, eagerness, and delight (Bandure, capara, Barbaranelli 2003).

Character Strength is psychological components or mechanisms that describe the moral base of the qualities (Peterson & Seligman, 2004). Character strengths are influenced by family,

relatives, people in the social group, society and other related factors. The VIA categorization defines six centre qualities Viz courage, love, justice, temperance, transcendence, and wisdom which are eternally present across all time periods and societies (Peterson & Seligman, 2004).

Implicit Self Esteem Greenwald and Banaji's (1995) defined it as "the introspectively unidentified or inaccurately identified effect of the self – attitude on evaluation of self associated and self dissociated objects.

Attribution assessment of happiness and unhappiness This concept is based on Werner's (1935) causal attribution theory. The focus is on causes or factors to which an individual attributes his/ her happiness or unhappiness. As per the theory, there are three dimensions of causal attribution namely, locus of control, stability or instability of cause over time and a person's ability to control a situation.

Review of Literature

Psychological Interventions have been found to be of great significance in reducing depressive symptoms. Evidences show that CBT has been comparatively better than sertraline mono-therapy and combination therapy post 12 weeks. The CBT mono-therapy group helps in immediate gain with initiation of interventions (**Milgrom 2015).**

Huang, Zhao, Qiang, & Fan (2018), studied the efficacy of cognitive behavioural therapy (CBT) in combination with pharmacological treatment for postnatal depression. Systematic researches were done across Pub Med, Embase, and the Cochrane library for evaluating efficacy of CBT. Meta analysis result showed significant improvement on Edinburgh Postnatal Depression Scale (EPDS) post CBT treatment in the experimental group as compared to control

group. Post CBT scores on Beck Depression Inventory (BDI) also improved with respect to immediate and long term gains. CBT also helped in decreasing the score on Depression Anxiety Stress Scales (DASS). To summarize, CBT is effective in dealing with symptoms and control progression of postnatal depression.

Interpersonal Therapy

Klier, Muzik, Rosenblum (2001) investigated the effectiveness of IPT for the management of depression post delivery. Scores of depression of 17 women who were diagnosed with postpartum depressive disorder (DSM-IV criteria) were found to have declined considerably after IPT treatment. Follow up assessments done after six months also showed positive and continuous effects of the intervention on the patient. Results indicated that IPT has positive implications of PPD showing positive results in reduction of depression symptoms.

Miniati,Callari, Calugi, Rucci, Svino (2014) did a systematic review of researches published between 1995 to 2013, with the aim to assess the effectiveness of IPT for PPD using PubMed and PsycINFO. They recognized 11 clinical trials for evaluating the effectiveness of IPT, of the eleven trials three trials were with group interventions (G-IPT) and one in the presence of spouse (PA-IPT). These research studies reported that IPT resulted in overall improvement on the commonly used measures of depression in PPD (EPDS, HDRS, and BDI) and frequently full recovery in several cases of treated patients. It is evident from clinical trials that when administered monotherapy (or combination with antidepressants). IPT shortens time of recovery and increases the duration of clinical remission phase of patients.

Mindfulness-based cognitive therapy

Mason & Hargreaves (2001) explored the introspective reports given by clients after sessions of MBCT. Seven clients were examined at two stages. Interview records of four clients were collected following MBCT. Grounded technique was used to assess the mental health difficulties as well their experiences of MBCT. Three extra participants who were practicing MBCT at that time were also interviewed for further validation. Significant areas of therapeutic change were recognized, through mindfulness skills, an attitude of acceptance and living in the moment. The mindfulness skills and its applicability in dealing with daily living were seen as important and ways through which this occur were discussed. This study shows regular practice of these skills for therapeutic gains and supporting MBCT as an effective in mood disorders and relapse prevention.

Emotion regulation

Berking, Ebert, Cuijpers (2013) assessed deficits in emotional regulation skills as predictive factor in maintenance of major depressive disorder (MDD). The research was conducted to assess if systematic training for emotion regulation were to be integrated in CBT would it increases the efficiency of latter in inpatient with MDD. 432 In- patients diagnosed with MDD were included and provided with regular sessions of CBT or CBT enriched with intense emotion regulation skill training (CBT-ERT). Findings proved that clients in the CBT-ERT state confirmed a significant reduction in depressive symptoms (response rates - CBT: 75.5%, CBT-ERT: 84.9%; remission rates - CBT: 51.1%, CBT-ERT: 65.1%).Furthermore, CBT-ERT participants showed significant reduction of negative affect. It was also found that the integrated

therapy was also effective in enhancing the well being and emotion regulation skills which are essential in maintaining the overall mental well being of the patient.

Character Strength

Tehranchi, Amiri, Neshant, Power (2018) studied predictive effects of a few character strength in depression. Battery of questionnaire assessing dysfunctional thoughts, basic emotions, character strength and depression were completed by the participants. Seven character strength of critical thinking, emotional intelligence, gratitude, forgiveness, hope, spirituality and zest were selected to assess the variables of character strength. Results indicated that character strength had opposing effects on dysfunctional thoughts and had a positive effect on happiness. Findings also showed that character strength can play a significant role in correcting dysfunctional attitudes and decreasing negative affect.

Implicit Self Esteem

Alkozei, Smith & Killgore (2018), investigated whether implicit measure of self esteem was related to higher levels of trait gratitude in a sample of 88 undergraduate students of which 41 were females. The study found that higher levels of trait gratitude were related to higher implicit self esteem depressive symptoms. Findings show significant relation between implicit measure of self esteem with psychological health and the implicit measures.

Attribution assessment of happiness

Wenzlaff & Prohaska (1989) conducted a study on college students t investigate the hypothesis that depressed people like to associate themselves with unhappy individuals provided that these individuals are not perceived to be responsible for their own unhappiness. Two groups of college

students Viz. depressed and non depressed were selected for the study. The two groups were selected for the study. The two groups were given information about others which denoted they were either happy or unhappy and that they were either responsible for this state. The results shows that while information about 'blameless, unhappy' others improved the mood of the depressed subjects, information about "deservedly happy individuals led to deteoriation in their symptoms. As compared to this the second group of non depressed individuals felt low on getting information about "unhappy others". The results of the study showed that while the non depressed subjects wanted to meet happy others, depressed subjects preferred to meet blameless but unhappy others.

Methods of the study

Rationale of the study

Post partum Depression affects women worldwide irrespective of their nationality, religion or status. Due to the biopsychosocial changes and other complications which may occur during or post pregnancy, makes women vulnerable to postpartum depression. It also has profound effect on infant, spouse, & on other children's. Because of the long term consequences and its wide potential for devastating results, the necessity to intervene and prevent PPD becomes a major concern for health. The rising prevalence and consequences makes it more important for considering preventive strategies and psychological intervention.

Review of literature shows that while a lot of studies have been conducted to assess the efficacy of different types of psychotherapies in PPD there are very few, researches especially in Indian context which have undertaken to evaluate and compare different types of interventions in treatment of PPD along with their impact on positive psychological variables which may have a

positive impact on reducing the severity of depression or even preventing it. This study may also have significant implications in understanding how by enhancing the levels of certain positive psychological variables women can be empowered to deal effectively with setbacks, traumatic events and accompanying hormonal changes.

Aims

- To assess the efficacy of different psychological interventions in Postpartum Depression.
- To investigate the role of these interventions in enhancing certain psychological attributes Viz emotion regulation efficacy, implicit self esteem, attribution assessment of happiness and unhappiness, character strength in the Patients.
- To study the effectiveness of interventions in terms of relapse prevention.

Hypotheses

In order to fulfill the above aims, the following hypotheses have been framed:

H1 There will be a significant difference in the post test scores of five intervention group Viz CBT, MBCT, IPT, CBT+IPT, Control group on Postpartum depression.

H2 There will be a significant difference in the pre & post scores of five treatment groups on

$H2_A$: PPD

$H2_B$: Emotion regulatory self efficacy

$H2_C$: Character Strength

$H2_D$: Attribution assessment of happiness & Unhappiness

$H2_E$: Implicit self esteem

H3 There will be a significant difference after three months in the scores of PPD, emotion regulation efficacy, implicit self esteem, attribution assessment of happiness and unhappiness, character strength amongst the five intervention groups.

Sample

The sample of the study will comprise 25 patients diagnosed with PPD with five patients in each of the following groups.

Experimental group 1	**Experimental group 2**	**Experimental group 3**	**Experimental group 4**	**Control Group 5**	
CBT	**IPT**	**MBCT**	**Combination of CBT & IPT**	**Antidepressants**	
5	5	5	5	5	25

Sample will be selected using purposive sampling technique as per the following criteria of inclusion & exclusion.

Inclusion criteria

- Patients in the age group of 21-31 years
- No history of miscarriage
- Stable on medication for at least 1 month prior to baseline assessment
- Primary diagnosis as per DSM 5

Exclusion criteria

- Patients who have Co morbid psychiatric & neurological disorder
- Patients who have undergone any type of psychological therapy.

Design of the study

Study will be conducted based on pre post control group design

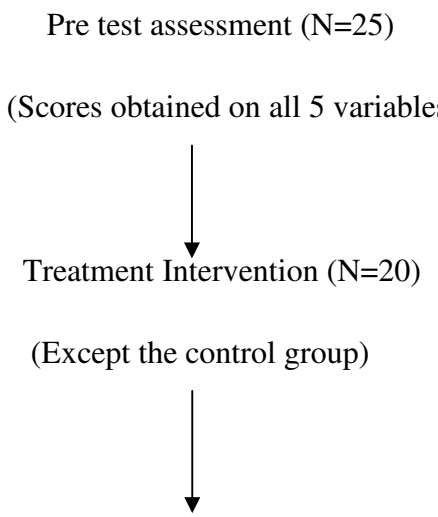
Variables/ Intervention Groups	**CBT (5)**		**IPT (5)**		**MBCT (5)**		**CBT +IPT (5)**		**AD (5)**	
	PRE	**POST**	**PRE**	**POST**	**PRE**	**POST**	**PRE**	**POST**	**PRE**	**POST**
Emotion regulation efficacy										
Attribution assessment of happiness & unhappiness										
Implicit self esteem										
Character strength										
Post partum depression										

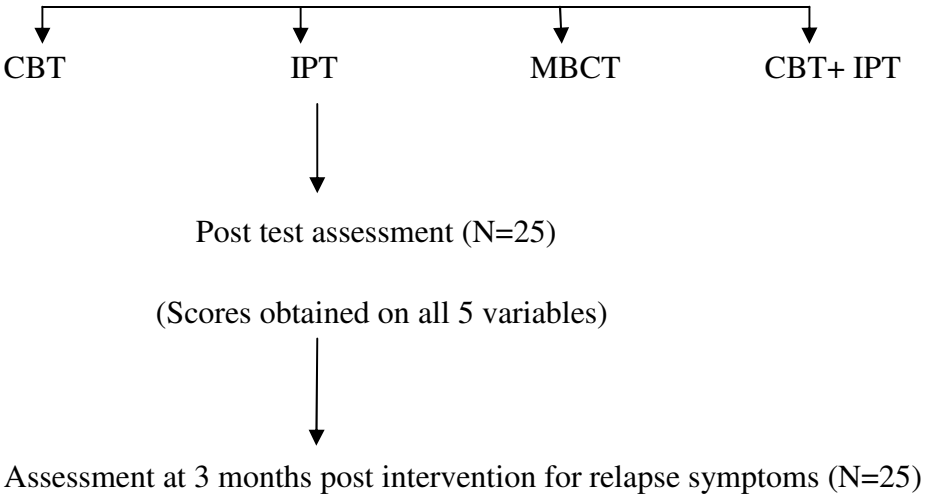
Measures

- Edinburgh Postnatal Depression Scale (Cox J.L.et al. 1987)
- Attribution style Questionnaire (Peterson et al, 1982)
- Character strength rating form (Ruch et.al, 2014)
- Regulatory Emotional Self – Efficacy scale (G. V. Capara & M.Gerbino, 2001)
- Implicit Association test (Anthony Greenwald, 1998)

Procedure

50 females diagnosed with PPD as per the criteria of DSM V will be selected for the study. A pre assessment will be conducted to measure their scores on emotion regulation efficacy, implicit self esteem, character strength, PPD, attribution of happiness and happiness. Out of these 25sample with similar score on these variables will be selected and provided with the psychological intervention viz CBT, IPT, MBCT, CBT+ IPT. Pre and Post assessment score will be compared to see the efficacy of the psychological interventions for PPD and their role in enhancing certain positive psychological concomitants.





Statistical analysis

- Mean
- Standard deviation
- Krushkal wallis test
- Paired sample T Test

SPSS 22 will be used to analyze the data

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